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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	
Application by SBC Communications Inc., Southwestern Bell Telephone Company, And Southwestern Bell Communications Services, Inc., d/b/a Southwestern Bell Long Distance For Provision of In-Region InterLATA Services in Texas	CC Docket No. 00-65

SUPPLEMENTAL REPLY COMMENTS OF COVAD COMMUNICATIONS COMPANY

This is the fourth time competitors have been asked to comment on SWBT's Texas application in the last five months. Despite the now-continuous "data dump" and submission of repetitive affirmations and assertions by SWBT, Covad and others continue to respond in unison—implementation by SWBT of its legal requirements is at best "a work in progress."

In light of discriminatory performance data and substantial OSS issues, on March 20, the Department of Justice refused to accept SWBT's first set of promises. SWBT re-filed its application on April 5 and gave us a new set of promises, which sparked even more activity before the Texas Commission on DSL loop-related issues. It is abundantly clear that what brought SWBT "back to the table" is the pending nature of its 271 application before this Commission. Granting this application prematurely—without ensuring that SWBT has fully implemented all of its legal obligations—would cause this incentive to disappear.

I. SO, HAS ANYTHING CHANGED?

In its Supplemental Comments, Covad and other CLECs pointed out several substantial flaws with SWBT's implementation of its legal obligations to date. These include, among other issues—

- SWBT's failure to implement line sharing. Importantly, SBC is now the *only* RBOC that Covad is currently being forced to arbitrate with regarding its failure to meet the June 6 implementation deadline—in Texas and in other states. It would be truly startling for the FCC to countenance SBC's stonewall tactics.
- Failure to finalize DSL performance measures and to report performance based on those final DSL performance measures.
- Failure to implement a simplified DSL loop OSS—a fix now promised by SWBT, but not deployed and tested.
- Failure to fully implement the firewalls ordered by the Texas Commission in the DSL Arbitration.
- Failure to have its separate advanced services affiliate up and running in a manner that would permit the Commission to presume nondiscriminatory treatment.

Other commenters echo these points.[1] Even the Texas Commission's evaluation frankly notes in several instances that issues still need to be resolved.[2] With regard to xDSL-capable loops, SWBT simply cannot prove that it is providing nondiscriminatory access because the intermediate steps listed above have not been taken. And until those steps are taken, CLECs remain in the highly frustrating position of restating the obvious.[3]

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[1] *See, e.g.*, Rhythms Supp.; Allegiance Supp. at 9 ("SWBT's xDSL provisioning is . . . deficient and blatantly discriminatory."); NorthPoint Supp. at 7-9 (re line sharing), 9-12 (re OSS), 12-13 (re structural separation); Joint Comments of @Link, Bluestar, DSL.net, Mpower, Pontio (Joint Commenters) at 7-11.

[2] TPUC Supp. at 3 (describing ongoing workshops), 25 n.66, 28, 36-37 (when line sharing is available, "easier [performance] comparisons will allow for more meaningful measures").

[3] NorthPoint observed that SWBT's re-filing was a "facelift", a "superficial change" that was made too quickly to be taken seriously. NorthPoint Supp. at 2.

The Department of Justice expressed similar frustration last week. Covad agrees with the DOJ in its conclusion that the "Texas II" application "was not substantially different from the record available in Texas I."[4] The DOJ clearly stated that absent any further supplementation of the record by SWBT, the DOJ would again recommend that the FCC reject the application. In the event the FCC decided to use post-application submissions to make its decision—a decision that would be contrary to Commission 271 precedent—the DOJ said it would base its analysis on April 2000 performance data, which will not be available in late May.

II. SWBT IS FAILING TO IMPLEMENT LINE SHARING

Despite multiple promises to the contrary, SBC is not implementing the FCC's Line Sharing Order in Texas. Indeed, SBC is the *only* RBOC with which Covad is being forced to litigate the availability of line sharing by June 6—in the last few weeks, all the other RBOCs have reached agreements with Covad (and other data CLECs) that should make line sharing a reality on June 6.

As Covad and other CLECs pointed out in Supplemental Comments, SBC's current line-sharing "offer" does not meet the requirements of the Line Sharing Order and is far inferior to other ILEC proposals and agreements.[5] As discussed by Covad, NorthPoint, Rhythms, and other CLEC commenters in the Supplemental Comments, SWBT is—

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[4] DOJ Texas II Evaluation at 3.

[5] The Texas Commission judiciously did not make any observations about the adequacy of SWBT's line sharing "offer" in its Supplemental Evaluation. *See* TPUC Supp. at 3.

- Refusing to provide line sharing functionality in the vast majority of Texas central offices by the June 6 deadline;[6]
- Refusing to enter into interim agreements, as all other RBOCs have done;[7]
- Refusing to implement line sharing over digital loop carrier ("DLC") systems;
- Refusing to provide test access, despite a clear mandate in the FCC rules;[8]
- Refusing to agree to appropriate provisioning intervals; and
- Insisting on extraordinary nonrecurring and monthly charges for line shared loops that, paradoxically, may make it *more* expensive for a CLEC to share a line than order a stand-alone loop.[9]

For these reasons, Covad has been forced into emergency arbitration with SBC in several states, including Texas.[10] As discussed in the attached Zulevic and Moya testimony (submitted to the Texas Commission in that proceeding), all Covad seeks from

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[6] As discussed in Attachment 1 (Zulevic Testimony) and Attachment 2 (Moya Testimony), SWBT is slow-rolling the type of line-sharing architecture favored by Covad and other data CLECs. In this architecture, SWBT would own and control the POTS splitter. Interestingly, SBC affirmatively lobbied for this type of architecture before the FCC in the 1999 Line Sharing Proceeding. *See* n.12 *infra*. SWBT's current plan would only have this form of line-sharing operational in 18% of Texas central offices by June 6. Attachment 2, Moya Testimony at 11. NorthPoint points out that this refusal may extend to *all* forms of line sharing, even the variety (now favored by SWBT) in which the CLEC owns and controls the POTS splitter. NorthPoint Supp. at 7-9. As Covad's witness Moya describes, SWBT's rollout schedule is the "worst deployment schedule" of all incumbent LECs. Attachment 2, Moya Test. at 11. Moya compares SWBT's offer to outfit 18% of requested offices ready with splitters by June 6 to Bell Atlantic's commitment to 88%, US WEST's commitment to 75%, and BellSouth's commitment to more than 50%. *Id.*

[7] NorthPoint Supp. at 8.

[8] Attachment 1, Zulevic Test. at 20-21.

[9] *See* Attachment 2, Moya Test. at 10.

[10] As mentioned in Covad's Supplemental Comments, Covad and Rhythms filed a Joint Complaint before the Texas Commission regarding SWBT's line sharing "offer." A hearing on that Joint Complaint is scheduled to begin this coming Monday, May 23, 2000.

SBC are line sharing rates, terms, conditions and implementation that other RBOCs have already stepped up to the plate and committed to. In particular, Covad requests[11]—

- An interim agreement that would have line sharing operational in all offices in Texas where data CLECs have collocated on June 6;[12]
- Implementation by June 6 of the line sharing architecture requested by Covad and other CLECs, and which has already been deployed and accepted by all other RBOCs;[13]
- Complete test access to the loop, line sharing acceptance testing, and a line sharing solution for DLC-fed loops;[14]

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[11] See Attachment 2, Moya Test. at 3-4 for a comprehensive list of Covad's line sharing requests to SWBT.

[12] Covad and Rhythms have proposed an Interim Agreement, attached to the Joint Complaint. Unlike SWBT's proposal, the Covad/Rhythms proposal does not attempt to impose conditions unrelated to line sharing. SWBT has been aware of Covad's requested deployment since immediately after the Line Sharing Order was released. *See* Attachment 2, Moya Test. at 9; Attachment 1, Zulevic Test. at 18-19.

[13] SWBT is legally obligated to provide the network architecture requested by Covad. First, Covad has a legal right to access UNEs in any "technically feasible" manner. The line-sharing architecture Covad has requested has been implemented by US WEST in Minnesota—as a result, this architecture must be presumed to be "technically feasible", pursuant to Commission rules established in the *Advanced Wireline Services* proceeding. *See First Advanced Wireline Services Order* at ¶ 45. Second, SWBT's proposed network architecture—in which the *CLEC,* not the ILEC, is required to split the voice and data lines—is fundamentally inconsistent with SWBT's legal obligation to provide the "high-frequency portion of the loop" as an unbundled network element. SWBT's architecture is, in the end, no different than providing CLECs a complete unbundled loop—not the high-frequency portion ordered by the FCC. *See* Attachment 1, Zulevic Test. at 15. SWBT's argument is akin to taking a position that by providing CLEC access to "dark fiber", that is sufficient to providing CLEC unbundled access to unbundled interoffice transport—because a CLEC could attach equipment to that dark fiber to support a DS1 or DS3 circuit. Just as Commission unbundling rules require access to both dark fiber and dedicated interoffice transport, the unbundling rules require that the ILEC provide both stand-alone loops and the high-frequency portion.

Finally, the architecture promoted by SWBT is directly contrary to the legal position SWBT took in the FCC's Line Sharing proceeding. Indeed, SWBT argued before this Commission that it would be *illegal* for any carrier *except it* to own and control the POTS splitter. *See* Comments of SBC, FCC Docket No. 98-147 (June 15, 1999) at 27 ("If [line sharing] is required, filtering equipment [POTS splitters] should be provided and managed by the provider of traditional voice service ("POTS") in order to maintain the privacy, reliability and security of the Lifeline voice service. Such equipment is necessary to comply with the privacy laws on voice service"). Now SWBT has turned on a dime and is advocating the exact opposite view before the Texas Commission and the FCC. Regardless as to outcome of this proceeding, the FCC

- A reasonable installation interval;[15] and
- A nondiscriminatory price for shared loops that, *inter alia*, reflects the forward-looking costs of the shared line element.[16]

The Commission must face the possibility that come June 7, SBC will be the *only* RBOC to have missed the June 6 line sharing implementation deadline. Yet SBC will be the *only* RBOC with a pending 271 application before the Commission. The consequences of moving forward on this application in that environment would be perilous indeed.

III. SWBT HAS NOT FULLY IMPLEMENTED DSL LOOP RELATED LEGAL REQUIREMENTS

Covad and several other commenters agree that SWBT has not met all of the legal requirements of the DSL Arbitration Award and other legal requirements. In its supplemental evaluation (which judged SWBT's DSL loop performance to be merely "adequate"),[17] the Texas Commission found that many aspects of DSL loop delivery and OSS are still pending. In particular, the Texas Commission stated that "to the extent

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should investigate whether SBC's June 15, 1999 advocacy in the Line Sharing proceeding was in full compliance with 47 CFR § 1.17 ("Truthful Written Statements.").

[14] *See* Attachment 1, Zulevic Test. at 20-21 (re test access); Attachment 2, Moya Test. at 17-18 (re line sharing acceptance testing).

[15] *See* Attachment 1, Zulevic Test. at 21-22.

[16] *See* Attachment 2, Moya Test. at 15-16. Moya describes that SWBT's cost proposal would actually make the price of a line-shared loop *more expensive* than a stand-alone loop. *Id.* at 10. On May 13, Bell Atlantic signed an interim agreement with Covad that applied a "zero cost" outside plant allocation pricing methodology for line-shared loops. *See* Covad Communications, "Covad Communications Reached Line Sharing Agreement with Bell Atlantic," May 15, 2000 (monthly line rate of $0.00 per line with other monthly recurring charges totaling less than $3.00).

[17] TPUC Supp. at 3.

some of the requirements are scheduled for implementation in the future", the Texas Commission "expects that SWBT will be in full compliance."[18]

The FCC's 271 review has been about *actual* implementation—not reliance upon implementation "scheduled for the future." Three areas stand out in particular—DSL performance measurements, Advanced Services OSS, and appropriate firewalls.

Performance measurements for DSL loops have not been finalized. One of the clear failings of SWBT's first Texas application was that the performance measurement system simply did not track DSL loop orders in a consistent and coherent way. The DSL Arbitration Award only began the process of writing complete and comprehensive DSL loop PMs—a process that continues to this day.[19] It would make little sense for the Commission to grant this application based upon a set of incomplete and inconsistent DSL performance measurements—especially when those measurements are currently being rewritten.

Covad strongly believes that correct and coherent DSL-related performance measures need to be established as soon as possible, because these measures should help spot discriminatory conduct. As discussed below and in CLEC comments, even under the current system, SWBT's own data shows significant discrimination in the provision of xDSL and BRI ISDN loops. As a result, once the new DSL performance measurements are put in place, it will be important to ensure that SWBT run its

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[18] *Id.* at 25 n.66.

[19] A series of collaborative sessions before the Texas Commission are scheduled through early June on this topic. The Texas Commission's Supplemental Evaluation directly states that these new measurements "are being developed in workshops." *Id.* at 28.

performance to date through those new measurements as part of this 271 review process.[20]

Necessary changes to the DSL loops OSS must still be implemented. Other CLECs confirm Covad's description of the cumbersome DSL loop ordering process, which often requires CLECs to submit multiple orders that cause due dates to be changed.[21] As discussed in Covad's Supplemental Comments, SWBT has committed to change this process during one of the Texas Commission collaborative sessions. That change has not been implemented yet. In addition, SBC's implementation of the Advanced Services OSS requirements of the SBC/Ameritech Merger Order is now in arbitration before the FCC Common Carrier Bureau.[22]

Although in this proceeding SWBT is extolling its ongoing rollout of OSS "enhancements", SWBT is concurrently refusing to provide CLECs a simple list of the pre-order, order, provisioning, maintenance, repair, and billing systems and databases that it is ostensibly "enhancing." The DSL Arbitration Award and Covad's interconnection agreement with SWBT both require SWBT to provide access to *all* of the OSS utilized by SWBT's service representatives, engineers, and its affiliate. Despite an order by the Texas Commission, SWBT has not provided a list of the OSS systems and databases used by those personnel. Without this information, it is impossible for Covad

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20 At a minimum, the Commission should clarify that when revised DSL performance measurements are issued, if SWBT's performance appears to decrease by virtue of that new measurement, the Commission will analyze that now-apparent deficiency under Section 272(d) of the Act.

21 *See, e.g.*, NorthPoint Supp. Comments at 4-6, Lewandowski ¶¶ 5-6, 14-16.

22 *See generally* Rhythms Supp. Comments.

and CLECs to ensure whether in fact the planned OSS "enhancements" actually provide nondiscriminatory access to all of SWBT's systems and processes.[23]

SWBT has not implemented a firewall that meets the terms of the DSL Arbitration Award. The DSL Arbitration Award found that SWBT had engaged in several specific instances of discriminatory conduct, and the Texas Commission required SWBT to establish a "firewall" plan to ensure competitive neutrality. In particular, the Texas Commission ordered that "SWBT should not be allowed to assign employees both wholesale and retail responsibilities . . . ."[24]

SWBT filed a revised plan on May 1, 2000, which the Texas Commission approved on May 8, 2000.[25] This plan is still deficient in several regards—

- SWBT's plan does not prevent SWBT from assigning employees both wholesale and retail responsibilities, despite the express language of the Award;
- CLEC customer information (e.g., information that could be used by SWBT to contact a CLEC's customer to market a service) is not regarded as "Competitor Information" in SWBT's plan;
- SWBT's plan does not describe the firewall methods by which confidentiality of information will be maintained—e.g., limitation of electronic access, segregation of files and records, etc.

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23 On May 4, 2000, Covad filed a motion before the Texas Commission, requesting an order to make SWBT comply with the Texas Commission's directive. SWBT responded on May 11, 2000, arguing that it was sufficient for CLECs to have a mediated access, "gateway" to key OSS functions. Covad's motion and SWBT's reply are attached as Attachment 3.

24 DSL Arbitration Award at 61.

25 All of which, incidentally, occurred after SWBT re-filed its 271 application on April 5, 2000.

On May 12, 2000, Covad filed a motion to the Texas Commission, seeking reconsideration of its approval of SWBT's plan.[26] Covad strongly believes that the firewall plan currently in place is inconsistent with the DSL Arbitration Award and is insufficient to protect adequately Covad's interest in receiving nondiscriminatory treatment from SWBT.[27]

IV. SWBT'S PERFORMANCE HAS NOT IMPROVED

The record evidence on SWBT's xDSL-capable loop provisioning practices is clear.[28] The DOJ indicated in its Supplemental Evaluation that the evidence currently in the record still does not support the necessary showing of nondiscriminatory treatment regarding xDSL-capable loops. Covad agrees—and the March 2000 performance data submitted by SWBT shows that serious problems remain.

Where are the Missing Loops? SWBT's performance measures still cannot keep straight the number of loops in service to CLECs. For example, PMs 55-03 and 56-03 report on the provisioning of 700 BRI ISDN loops in the last 12 months. PMs 58-04, however, tracks missed due dates for 3652 BRI ISDN loops for the same period, and PM 65-03 (Trouble Report Rate) tracks 2215.

SWBT will no doubt repeat the same refrain that PMs 55 and 56 are somehow skewed by the manner in which CLECs change or alter due dates on orders, which

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[26] *See* Attachment 4 for a copy of this motion.

[27] SWBT's separate advanced services affiliate is not sufficient to meet the requirements of the DSL Arbitration Award. In addition, as Allegiance points out, "[t]here is no data whatsoever tracking this entity's provisioning performance, to the extent it has any." Allegiance Supp. at 10.

[28] *See, e.g.,* Allegiance Supp. at 9-10 ("The provisioning statistics speak for themselves . . . . SWBT has provided higher quality provisioning to itself one third of the time since September 1999.")

somehow causes those orders to drop out of the system.[29] Isn't it curious, however, that when SWBT's interest is better served with a "high" number of loops in service (i.e., for PM 65, Trouble Reports), it reports a large number of loops in service—yet when SWBT's case is perhaps easier proved by looking at the installation intervals for "easy" loops (those that make it through the Byzantine ordering process the first time), it examines only a smaller subset of loops?

The same can be said of DSL loops. PM 55.1 tracks the average installation interval of 2133 DSL loops—but PM 58-09 assesses due date performance on delivery of 3629 DSL loops. This tracking error continued through March 2000.

The problem is not limited to loop deliveries—and is indeed worse for DS3 interoffice transport and dark fiber deliveries. PMs 55 and 56 only tracked *fifteen* orders of DS3 interoffice transport in the last 12 months—while PMs 58 and 65 indicate that either 140 or 171 unbundled DS3 transport circuits were put in service in the same period. PMs 55, 56, 58 and 65 for dark fiber reveal similar gaps.

These gaps in the data demonstrate that this is not simply a "DSL loop problem" or a problem with the manner in which a particular CLEC orders loops—these gaps are endemic in the system.

SWBT continues to fail on FOC Delivery. Although Covad and other CLECs strongly object to the manner in which SWBT reports data on PM 5.1 (DSL Loop

[29] CLECs, of course, dispute that this happens—and it is certainly not credible to believe that CLECs actually want *longer* due dates for nearly 80% of their orders.

FOCs),[30] these reports still indicate that SWBT does not meet the benchmark. The Texas Commission agreed.[31]

Missed Due Dates (58-09) has Never Been at Parity. SWBT has not been at parity once for PM 58-09 (Missed Due Dates). In March 2000, SWBT's data shows that it was more than twice as likely to miss a CLEC loop due date than for SWBT retail service.

The Texas Commission and SWBT try to explain away this lack of parity by stating that there is no "established retail analog" for CLEC DSL loops.[32] SWBT also argues that this measure is skewed because CLEC DSL loop orders are more likely to run into "facilities" issues than SWBT's retail orders DSL orders, which utilize line sharing.[33]

It is important for the Commission to look behind the veil of these arguments. Since a DSL loop utilizes the same twisted copper infrastructure as analog POTS service and BRI ISDN service, how can no "established retail analog" exist? Doesn't SWBT's performance in delivering analog POTS, residential second lines, or BRI ISDN service test SWBT's ability to provide a stand-alone, twisted copper loop? Was SWBT's performance in those services examined—and does SWBT miss 12% of the due dates for

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30 SWBT unilaterally decided to start "reporting" PM 5.1 based on its *proposed, draft* business rule without the Texas Commission's approval of that business rule. As Covad discussed in Supplemental Comments, SWBT's proposed business rule makes this PM impossible for a CLEC to independently verify, because the clock starts when one division of SWBT delivers a loop qualification result to the division of SWBT that generates FOCs—a communication CLECs are not privy to.

31 TPUC Supp. Eval. at 29.

32 TPUC Supp. at 30.

33 On March 20, the DOJ found SWBT's argument to be unpersuasive, pointing out that stand-alone loops for DSL services would still be necessary even after line sharing were made available. March 20 DOJ *ex parte* at 4. SBC's commitment to have ASI order a limited number of stand-alone loops bears little relevance—*see* NorthPoint Supp. at 13 n.13.

those services as well? And isn't it the height of absurdity to argue that the inability to obtain line sharing is now used as a justification for discriminatory installation performance?[34]

Performance on BRI ISDN Loops Significantly Discriminatory. The Texas Commission admits that SWBT's delivery of BRI ISDN loops "lags."[35] The Texas Commission deftly states that it "cannot determine the reasons why this performance is non-compliant because CLECs have not brought any complaints to the Texas Commission regarding the compatibility of BRI loops and IDSL technologies."[36]

With all due respect, SWBT bears the burden of proof in this 271 application—not CLECs.[37] SWBT has made a spurious claim that IDSL requires a loop that is somehow harder to provision than BRI ISDN technology—a claim that Covad's Rosenstein Declaration demonstrates to be untrue. In addition, Covad's interconnection agreement with SWBT specifically mention the use of ISDN loops for IDSL technology. With that contractual commitment in place, SWBT now bears the burden of proving that it is providing those BRI ISDN loops to Covad and other CLECs in a timely and

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34 *See* Joint Commenters Supp. at 14 (SWBT's argument "perversely attempts to blame SBC's own poor performance in terms of missed due dates on its own discrimination against CLECs in the provision of line sharing.").

35 TPUC Supp. at 35.

36 *Id.*

37 As the Joint Commenters state, "SBC has not provided any indication of improved performance [on BRI loops] but merely provides belated excuses." Joint Commenters at 18.

ondiscriminatory manner. Providing excuses at this late juncture is not a substitute for working to resolve the problem.[38]

In addition, it is clear from SWBT's performance on PMs 56-03, 58-04, 59-03, 60-03, and 63-03 that SWBT simply does not meet the benchmark interval of 3 business days for BRI ISDN loops—even SWBT and the Texas Commission admit this fact.[39]

SWBT simply fails to understand the importance of this failure to meet this benchmark. SWBT may not like the reality of the 3 business day interval—but reality it is.[40] SWBT now asks the FCC to ignore this part of the T2A and the DSL Arbitration Award by calling this benchmark provisions "unreasonable."[41] It would be surpassing strange for the FCC to base an approval of this application on the T2A while at the same time ignoring SWBT's demonstrated failure to meet this legal requirement.

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38 *See* Allegiance Supp. at n.16 ("SWBT admits that it will not be able to comply with the [Texas Commission] benchmarks, which it claims are set at unrealistically high levels, for the foreseeable future.").

39 Chapman/Dysart Supp. Aff. at para. 44-51; TPUC Supp. at 35.

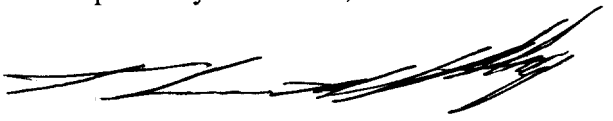
40 Of course, breaching interconnection agreements may simply be the way in which SBC does business. *See* Covad Communications, "Covad is Awarded $27.4 million in Arbitration Against Pacific Bell," May 16, 2000 (describing award to Covad of $27.4 million plus costs for SBC's breaches of the Telecommunications Act of 1996 and its interconnection agreement with Covad.)

41 Chapman/Dysart Supp. Aff. at 51.

V. CONCLUSION

SWBT still has not completed the job. If anything, SBC's litigious approach to unbundling is reaching the breaking point—for SBC is the *only* RBOC in which Covad must litigate the availability of line sharing by the FCC's June 6 deadline. If this is the behavior of a BOC that should be on "best behavior", given the pending nature of this application, imagine what SBC's attitude towards line sharing and other unbundling obligations would be if this application were granted prematurely? Food for thought.

Respectfully submitted,



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Dated: May 19, 2000

ATTACHMENT 1

COVAD COMMUNICATIONS COMPANY
May 17, 2000

DOCKET NO. 22469

COMPLAINT OF COVAD COMMUNICATIONS COMPANY AND RHYTHMS LINKS, INC. AGAINST SOUTHWESTERN BELL TELEPHONE COMPANY AND GTE SOUTHWEST INC. FOR POST-INTERCONNECTION AGREEMENT DISPUTE RESOLUTION AND ARBITRATION UNDER THE TELECOMMUNICATION ACT OF 1996 REGARDING RATES, TERMS, CONDITIONS AND RELATED ARRANGEMENTS FOR LINE-SHARING	§	**BEFORE THE** **PUBLIC UTILITY COMMISSION** **OF TEXAS**

DOCKET NO. 22168

PETITION OF IP COMMUNICATIONS CORPORATION TO ESTABLISH EXPEDITED PUBLIC UTILITY COMMISSION OF TEXAS OVERSIGHT CONCERNING LINE-SHARING ISSUES	§	**BEFORE THE** **PUBLIC UTILITY COMMISSION** **OF TEXAS**

PHASE I TESTIMONY OF MICHAEL ZULEVIC
ON BEHALF OF COVAD COMMUNICATIONS COMPANY

Pages

ONA/Collocation Technical Team; Circuit Administration Trunk Engineer, specializing in switched access services; and Custom Network Design and Implementation Engineer working with the design and implementation of private networks for major customers.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to assist the Commission in determining (1) the most efficient network architecture for use with DSL line sharing; (2) where competitive local exchange carriers ("CLECs") should be given physical access to the shared loop for testing purposes; (3) when SBC should finish the initial deployment of splitters necessary to provide CLECs with access to the high frequency spectrum network element and (4) a reasonable provisioning interval for the high frequency spectrum network element. To accomplish this purpose, my testimony describes the network architecture that CLECs and incumbent local exchange carriers ("ILECs") should use to make central offices capable of supporting line sharing. I will also describe several feasible points where CLECs can have physical access to the shared loop for testing purposes. Finally, I will describe what work is necessary to provision the high frequency spectrum network element and how long it takes to perform that work.

Q. Have you been involved in designing the network architecture for line sharing?

A. Yes. I helped negotiate the first ever line sharing agreement with U S WEST in Minnesota, where I helped to design the network architecture that is now in place there. I

have also been involved with the network design negotiations with other ILECs, including BellSouth, Bell Atlantic and SBC.

Q. Has Covad entered into line sharing agreements other than the Minnesota agreement with U S WEST?

A. Yes. Covad now has interim or final line sharing agreements with Bell Atlantic, BellSouth and U S WEST (for the other 13 states in U S WEST's region).

Q. Please discuss your experience designing the line sharing architecture used in Minnesota.

A. I directed the Covad team that negotiated line sharing network design and deployment with U S WEST during a 45-day period mandated by the Minnesota Commission for testing and working out operational issues for line sharing. As a result of those negotiations, Covad and U S WEST entered into the interim line sharing agreement approved by the Commission on December 3, 1999. Since then, I have continued to meet with U S WEST regularly to discuss network design issues. Just recently, U S WEST and a group of more than 10 CLECs, including Covad, entered into an Interim Line Sharing Agreement for the 13 states in U S WEST's territory outside of Minnesota. The network architecture I helped design for Minnesota will also be used for line sharing in those states.

Q. Please generally describe the Line Sharing architecture being used in Minnesota.

A. The Minnesota Line Sharing architecture is similar to virtual collocation in many respects. The splitter is either purchased by the CLEC and furnished to U S WEST, or purchased by U S WEST on behalf of the CLEC (without markup). U S WEST then installs the splitter along with the necessary cabling and connector blocks, in the most efficient place in the central office. This architecture allows Covad test access, both intrusive and non-intrusive, at the U S WEST MDF or IDF.

Q. Have you been involved in deploying the equipment necessary to make a central office ready for line sharing?

A. Yes. I am directly responsible for Covad's deployment of line sharing equipment across the country. Covad's Minnesota deployment is complete, and Covad has done pilot deployments in California, Texas, Illinois, Georgia, and New York. Deployment is proceeding rapidly in Colorado, Washington, Oregon, Arizona, Utah, New Mexico and Georgia in accord with our agreements with U S WEST and BellSouth.

OPTIONS FOR PROVISIONING DSL LINE SHARING

Q. Is there more than one possible way for the ILEC to make a central office capable of provisioning DSL line sharing?

A. Yes. The only thing that must always be true is that the network architecture (the configuration of the equipment within the central office) must be designed to place the POTS splitter in the central office between the frame and the DSLAM and analog voice switch.

There are three basic options that have been discussed for provisioning line sharing, each of which follow the basic design rule I outlined above.

In Option One, the ILEC owns, installs, operates and maintains the splitter. The CLEC can then access the lines that run through the splitter on either on a one-at-a-time or bulk basis. BellSouth prefers to provide this Option One, and Covad will be using this option – with the ability to access the telephone lines on a bulk basis – in BellSouth territory.

In Option Two, the CLEC owns the splitter and either leases or sells it to the ILEC. The ILEC installs, maintains and operates it in an arrangement similar to virtual collocation. All of the tie-cables in the central office can be pre-provisioned (and in some cases hardwired) to make provisioning much faster and easier. As I will discuss later in my testimony, the basic network architecture for Option One and Option Two are identical. The main difference between the two options is the purchasing and ownership of the splitter. U S WEST and Bell Atlantic both offer this option in their territory and Covad is using it there.

In Option Three, the CLEC owns and operates the splitter, but collocates it in the CLEC's collocation area. U S WEST and Bell Atlantic also offer this network architecture option, and at least one CLEC has taken advantage of it.

Later in my testimony, I will describe in greater detail the basic network architecture that I helped design for line sharing with U S WEST. This basic architecture can be used to

provide either Option One or Option Two. It also provides the template for a design that works for Option Three.

Q. Which is Covad's preferred option for obtaining access to the high frequency spectrum UNE?

A. We firmly believe that ILECs must provide the full menu of all three options to the CLECs. All three have been proven to be technically feasible in different parts of the country. Covad, however, prefers Option One, where the ILEC purchases, installs, operates and maintains the splitter. Covad strongly favors Option Two, the architecture we have implemented with U S WEST, as the second choice.

Q. Why does Covad prefer an ILEC owned and operated splitter option?

A. First, the network architecture that underlies this option should place the splitters on or in close proximity to the distribution frame where the CLEC tie cables appear. This location minimizes the need to add additional cable length, allows for the use of existing CLEC tie cables, and allows the ILEC to make the most efficient use of their central office space. It also allows the ILEC to determine the splitter model and manufacturer, and to make bulk purchases that should result in better pricing and simpler maintenance. This architecture also allows the ILEC to maintain control of the voice portion of the shared line and avoid the needless transporting of the voice service to and from the CLEC collocation arrangement.

Q. In Option One, which is the more efficient method of allowing CLECs to access high frequency spectrum network element – one line at a time or on a bulk basis?

A. The most efficient way is to allow CLECs to purchase an entire splitter of lines from the ILEC on a bulk basis. That way, the splitter can be pre-wired, thereby reducing provisioning time and costs. Covad's agreement with BellSouth allows us to buy splitter ports in increments of 24 or 96, at our option. Option Two always provides the CLEC with this more efficient bulk-splitter option because the CLEC owns the splitter.

THE BASIC NETWORK ARCHITECTURE FOR LINE SHARING

Q. What equipment is necessary to make a central office ready for line sharing?

A. It is very easy to make a central office ready to provide line sharing. The only additional equipment that needs to be collocated (beyond the DSLAM and other equipment necessary to provide DSL service without line sharing) is the POTS splitter. The POTS splitter is a passive, non-powered device that separates the DSL and voice signals so they can be directed to the appropriate equipment.

Q. What does the function of the POTS splitter mean for the design of the network architecture for line sharing?

A. It means that, whatever architecture is used, the splitter must functionally be placed in the circuit between the end-user and both the DSLAM and the analog switch.

The splitter literally separates and combines the voice frequencies and the data frequencies. (If you think of the data and voice signals as coming to the central office from the customer premise -- as when the customer places a phone call or sends an e-mail-- then the splitter is separating the voice and data signals and directing them to the appropriate central office equipment. If you think of the data and voice signals as flowing from the DSL equipment and the voice switch to the customer -- as when the customer is receiving a phone call or an e-mail -- then the central office splitter is combining the two signals onto the one loop for transmission to the customer premises, where they will be separated again.)

The separate voice signals leave and enter the splitter through a voice port that is also connected to the IDF across another hard-wired tie cable. On Attachment A, the elements that carry voice only are identified as the light, dotted line, labeled "TC." At the IDF, the voice signal is cross-connected to another EICT that carries the signal to and from the COSMIC frame, where the ILEC cross-connects the line to its own voice switch. On Attachment A, this signal is the light, dotted line labeled "EICT."

The separate data signals leave and enter the splitter through a data port that is also connected to the IDF across another hard-wired tie cable. On Attachment A, the elements carrying data signals only are represented by the dark, solid line. The tie-cable I am referring to here is the solid line connected to the splitter labeled "TC." That tie cable is directly connected to a second tie cable, which carries the data signals between the

IDF and Covad's DSL equipment. On Attachment A, this signal is the dark, solid line connecting the IDF to the DSLAM labeled "TC."

Q. How does the network architecture differ in central offices where an ILEC uses a main distribution frame instead of a COSMIC?

A. Attachment B to my testimony is a diagram showing the basic configuration for a central office that uses an MDF. The legend and markings are the same ones I used for Attachment A. As you can see from Attachment B, the combined voice and data loops are cross-connected from the frame across EICT/ tie cables to the voice and data port on the splitter. The separate voice signal travels across another EICT/ tie cable to and from the MDF. The separate data signal travels across a hard-wired tie cable to and from Covad's DSL equipment.

Q. How do these network architectures relate to the provisioning options you discussed earlier?

A. Both Attachments A and B to my testimony show basic network configurations that can be used to provide either Option One or Option Two. The only provisioning difference is that the splitter cannot be hard-wired if access to the lines is sold on a one-at-a-time basis under Option One. That is why Covad recommends that the Commission require SWBT and GTE to provide Covad with the option of purchasing an entire splitter's worth of lines (approximately 96) in bulk

Q. Are there any variations to the architecture you described that you would like to discuss?

A. Yes. The network architectures I described assume the use of a splitter shelf that fits in an equipment bay located near the frame. The most efficient network architecture, however, involves a splitter mounted on the ILEC distribution frame. The use of the frame mountable splitter results in the need for only two cross-connects (on the distribution frame, connecting the telephone line through the splitter to the central office switching equipment) and one tie cable (from the splitter's data port to the CLEC DSLAM). This architecture lowers costs, eliminates potential points of failure and makes line provisioning a snap.

There is at least one model of splitter that currently is designed to be mounted on the ILEC frame. The manufacturer, Siecor, also manufactures the splitter shelves that SWBT and GTE will be deploying for CLEC use in Texas.

No ILEC has agreed to make the frame mounted splitter option available to Covad as a first option. That is why Covad worked with the ILECs to design the alternative architectures. U S WEST has agreed to mount splitters on its frames either (a) when space is not available elsewhere in the central office, or (b) in certain smaller central offices.

SWBT AND GTE ARE IMPROPERLY TRYING TO FORCE COVAD TO CHOSE AN INEFFICIENT NETWORK ARCHITECTURE.

Q. What network architecture have SWBT and GTE proposed for line sharing in Texas?

A. I understand that SWBT and GTE both have agreed to provide either Option Three or a variation of the provisioning method I describe as Option One. Under Option One, both SWBT and GTE will only agreed to provide splitter access on a port at a time basis. In addition, in the SWBT variation on Option One, SWBT will locate the splitter only in "Common Collocation" areas, unless there is no longer any space there, and will only provide CLECs with the ability to purchase splitter access on a port-at-a-time basis. GTE will place the splitter somewhere in its central office, but will not agree in advance to place the splitter on the distribution frame or as close to the distribution frame as possible.

Q. What is wrong with SWBT's and GTE's proposals?

A. Several things. Generally, the variation that SWBT is proposing to Option One results in an inefficient network design. Placing the splitter in the Common Collocation Area instead of on or near the distribution frame results in the need for longer tie cables to and from the frame. That can result in increased costs and increased opportunities for network failure. This problem is particularly acute when the distribution frame and the Common Collocation Area are on different floors of the same building.

In addition, SWBT's and GTE's decision to make Covad purchase splitter access one port at a time will require them to provision the tie cable leaving the data port on the splitter all the way back to the distribution frame. There it will be cross-connected to yet

another tie cable leading back to Covad's DSLAM. This will be required even if the splitter is located near or adjacent to Covad's collocation area in the central office. This creates unnecessary cable length for the data cable, additional costs, and a new, unnecessary potential point of failure (the data cable cross-connect at the distribution frame).

If SWBT and GTE agreed to provide Covad with the bulk purchasing option Covad seeks, then they could hard-wire the splitter data ports directly to Covad's DSLAM. This architecture would eliminate unnecessary cable lengths, reduce costs, and eliminate the potential point of failure.

The ILEC proposed variation on Option 1 also means additional provisioning work for every line, resulting in the potential for additional costs and additional places where central office technicians can make customer-affecting mistakes.

In addition, SWBT's insistence on placing the splitter in the Common Collocation Area will reduce the amount of available efficient space for CLECs to collocate their transmission equipment. It does not make good sense to use up that space when the more efficient architecture suggests that the splitters should be placed closer to or on the distribution frame.

Finally, the proposal by SWBT and GTE forces Covad to rely on the ILECs for capacity management of the splitter. In other words, Covad will have no idea whether there are 1,

appear that the FCC was simply making it clear that the ILEC could require that it own the splitter under certain terms outlined in the order.

Q. In your opinion, why did the FCC address this issue in that fashion?

A. Because SWBT and other ILECs insisted on it. Attachment C to my testimony is a copy of page 27 from SBC's June 15, 1999 filing in the FCC's line sharing docket. As the Commission can see, SBC argued there that "Spectrum unbundling [line sharing] should not be permitted. If it is required, filtering equipment [POTS splitters] should be provided and managed by the provider of traditional voice service ("POTS") in order to maintain the privacy, reliability and security of the Lifeline voice service. Such equipment is necessary to comply with the privacy laws on voice service."[1]

It is completely inappropriate for SWBT to now argue that language it wanted included in the line sharing order to give it license to force CLECs to let SWBT own the splitter actually means that SWBT has the option of providing the splitter or not. The FCC's order clearly requires SWBT to provide Covad with access to the high frequency spectrum on an existing voice loop, and SWBT must provide that access by deploying whatever equipment is required.

Q. Are there any other reasons you believe that SWBT and GTE must provide splitter options beyond those it currently intends to deploy?

[1] As the Commission is aware, SWBT has agreed to allow CLECs to purchase the splitter and collocate it in the CLEC's collocation area if the CLEC so chooses. SBC's willingness to allow this option demonstrates that the concerns it expressed at the FCC regarding such an arrangement were unfounded.

A. Yes. As I previously discussed, Covad and U S WEST have established that it is technically feasible for an ILEC to collocate a CLEC owned splitter on or adjacent to the distribution frame and provide the CLEC with test access at the cross-connects to the three splitter ports. In the interim agreement, which is attached as Attachment D to my testimony, we refer to this as Common Area Splitter Collocation. This new form of collocation is really a hybrid of virtual and cageless collocation, where multiple CLECS will collocate splitters in the same bay.

Under the FCC's First Report and Order In the Matters of Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147 (the "706 Order"), SWBT and GTE must provide this technically feasible collocation option to Covad. The 706 Order states, at paragraph 45, that "Based on the record, we now conclude that the deployment by any incumbent LEC of a collocation arrangement gives rise to a rebuttable presumption in favor of a competitive LEC seeking collocation in any incumbent LEC premises that such an arrangement is technically feasible. ... The incumbent LEC refusing to provide such a collocation arrangement, or an equally cost-effective arrangement, may only do so if it rebuts the presumption before the state commission that the particular premises in question cannot support the arrangement because of either technical reasons or lack of space."

Q. Is "Common Area Splitter Collocation" in the U S WEST agreement the same thing as placing the splitter in the common collocation area as proposed by SWBT?

A. No. SWBT has designated common collocation areas where CLECs only are collocated. That common area can be a significant distance from the distribution frame. In the U S WEST agreement, U S WEST has agreed to collocate the splitter in a relay rack as close to the distribution frame as possible. The "common area" that U S WEST refers to, therefore, is actually in the ILEC part of the central office.

TIME REQUIRED FOR DEPLOYMENT

Q. How long should it take SWBT and GTE to make central offices ready for line sharing deploying the network architecture favored by Covad?

A. The FCC's line sharing order required SWBT and GTE to provide line sharing to Covad on or before June 6, 2000. Covad has done everything required of it to make it possible for SWBT and GTE to meet this deadline, and they should be required to do so.

Q. Is that feasible?

A. Certainly. Covad told SWBT which architecture it preferred at our very first meeting with SBC in January, 2000. After SWBT finally agreed that the splitter did not have to be placed in the CLEC collocation area, Covad and a group of other CLECs provided SWBT with a prioritized list of central offices in Texas to make service ready for line sharing. That happened on March 2, 2000. Covad followed that up on March 11 with a detailed forecast of line sharing volumes broken down by central office. Covad and the other CLECS also worked with SWBT to decide on the vendor (Siecor) for the splitters SWBT would install.

In addition, Covad informed GTE what its preferred network architecture is on February 22, 2000. Covad and other CLECs provided GTE with our line sharing forecasts for Texas on March 8, 2000. GTE used those forecasts to prioritize Texas central offices for deployment and gave us the prioritized list on March 15, 2000. GTE also selected Siecor as the preferred splitter vendor.

Accordingly, SWBT and GTE have known for months what Covad's preferred architecture is; they have known for months which splitters they would deploy and they have known for months where that architecture needs to be deployed. There is no excuse for either SWBT or GTE not to be ready to comply with the order on June 6.

Q. How long should it take SWBT and GTE to provision new splitters for orders placed after June 6?

A. The provisioning interval for installing new splitters, whether they are provided by SWBT or Covad, should be no more than 30 days. SWBT is required to provide an entire cageless collocation arrangement – up to six bays of space – to Covad in either 55 or 70 days. Certainly, SWBT should be able to install one shelf of equipment (the equivalent of $1/14^{th}$ of a bay) in 30 days, if not faster. I also believe this is a reasonable interval based on my experience both working in a central office with U S WEST and collocating equipment as a CLEC after I joined Covad.

As I stated earlier, the Commission can insure that Covad has the ability to properly perform capacity management by mandating a reasonable interval for installing new splitters. Better capacity management leads to better and faster customer service for Texas consumers.

TEST ACCESS

Q. What are SWBT and GTE's positions on test access?

A. SWBT and GTE both have refused to allow direct physical test access to the three cross-connect points for the splitter ports. Instead, SWBT is ordering splitter cards that have pin jacks on the front that will allow Covad to test to determine if there is a data stream at that card. GTE has agreed to provide Covad with access to GTE's mechanized loop test equipment to test the electrical characteristics of the line between the splitter and the customer premises.

Q. Why isn't SWBT's proposal sufficient?

A. SWBT's proposed "solution" will not allow Covad to test the high frequency portion of the loop from the splitter data port back to the distribution frame, through the cross-connect, and back to the DSLAM.

Q. Why isn't GTE's proposal sufficient?

A. GTE's proposed solution will not allow Covad to verify or test any of the cross connect points going into or out of the splitter.

Q. What type of test access does Covad want?

A. Covad wants direct physical access to loop at the cross-connect points for the three splitter ports. This is the same level of access that SWBT and GTE have across their territory for testing their voice and data services. This level of access is required so that Covad can isolate troubles on the loop to identify what elements of the DSL or voice network, if any, need repair. With test access at this point, CLECs would be able to insure that they are working on the correct customer's line by using the automatic number identification (ANI) feature. The CLEC would also be able to verify that the proper cross connect has been made for the customer's service. ILECs utilize this same test access to isolate trouble for their own customers. CLECs should be afforded the same opportunity to test for their customers.

Just as the ILEC must occasionally open the line to the customer to perform trouble isolation, this same capability must be available to CLECs to isolate data troubles for the same customer. SWBT and GTE must realize that we are not only sharing a line, but we are also sharing a customer. CLECs such as Covad have an interest in retaining and maintaining the quality of their data service that is equal to the ILECs' interest in their voice services.

PROVISIONING INTERVAL

Q. Based upon your many years of experience with working in the central office environment, how long does it take to perform the physical work necessary for provisioning a line shared loop?

A. If the splitter is properly installed as described in my testimony, the only physical work required for the provisioning of a line shared loop is wiring the splitter configuration into the existing service, which involves removing one cross-connect on the MDF or COSMIC and replacing it with two new cross-connects. This process should easily be accomplished in less than 10 minutes. No additional time or work is necessary. Line sharing does not require any work to be performed outside of the central office and the existing customer telephone number and cable pair are both reused.

Q. How long, then, should it take SWBT and GTE to fill a loop order for line sharing?

A. No more than 24 hours for a loop that does not require conditioning. Given that the physical process required to provision the loop takes only 10 minutes, then there is no SWBT and GTE can require more than 24 hours to complete that process. Recognizing that this is faster than SWBT and GTE currently provisions UNE loops, Covad has proposed a "step-down" process to drive the final interval to 24 hours within 90 days. Under that proposal, the ILECs would provision loops in first 3 days (from June to September), then 2 days (from September to December) and then 24 hours beginning on December 7, 2000. Covad has also proposed 5 business days for provisioning when conditioning is required.

RECOMMENDATIONS

Q. Based on your testimony, what recommendations do you want to make to the Commission.

A. I want to make the following recommendations.

(1) The Commission should order SWBT and GTE to provide all three line sharing provisioning options described in my testimony on or before June 6, 2000.

(2) The Commission should order SWBT and GTE to deploy the most efficient network architecture available for each of the three options. This means, for Options One and Two, hard-wiring the splitter and placing it on or as close to the distribution frame as possible.

(3) The Commission should order SWBT and GTE to provide intrusive test access to the voice and data lines at the three cross-connections to the splitter ports.

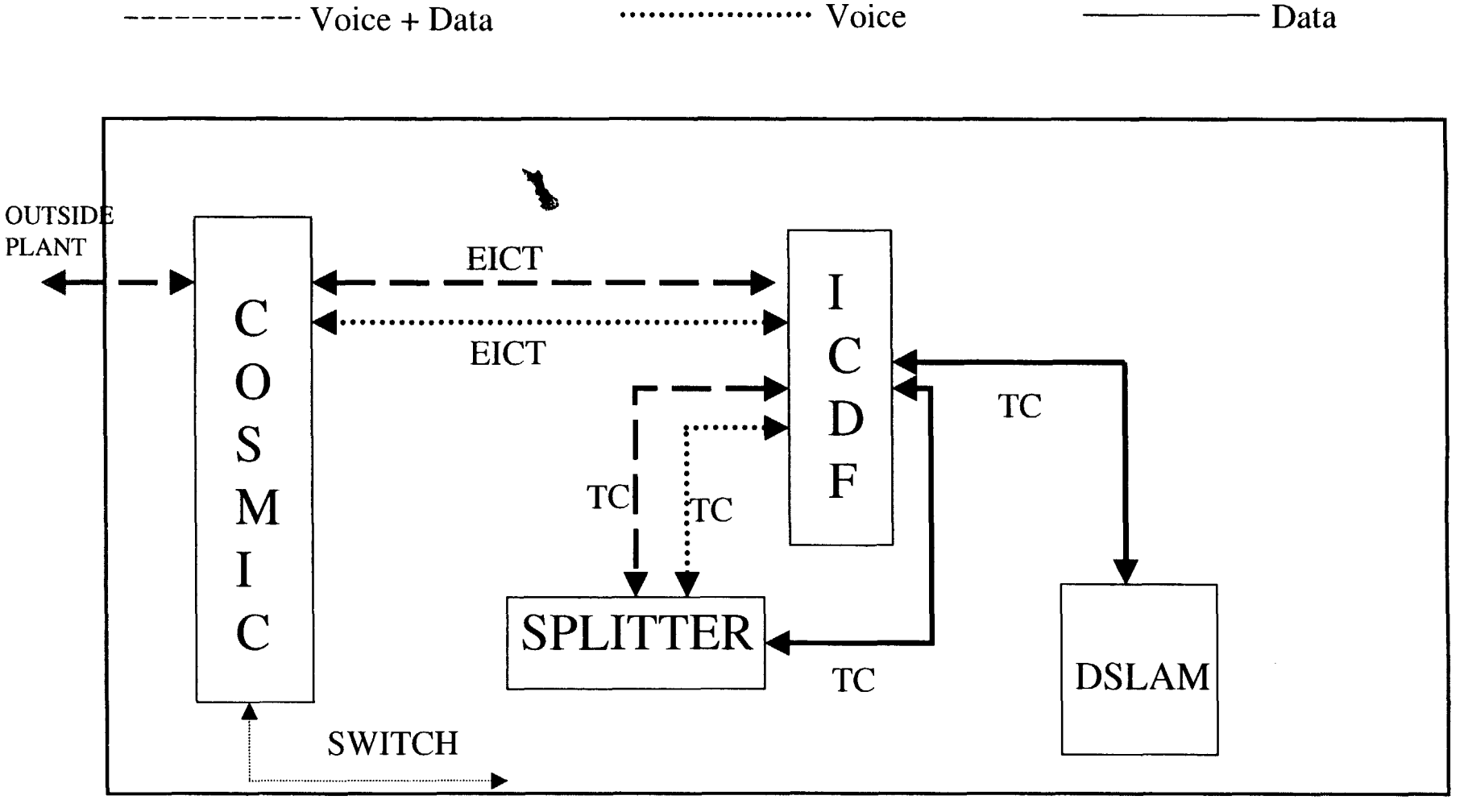
(4) The Commission should order SWBT and GTE to provision loops for line sharing in less than 24 hours after the order is placed by the CLEC. The Commission could chose to order the interim intervals proposed by Covad as a way of easing into the appropriate 24 hour interval.

(5) The Commission should require SWBT and GTE to install new splitters within 30 days of receiving a request from Covad.

Q. Does this conclude your direct testimony?

A. Yes.

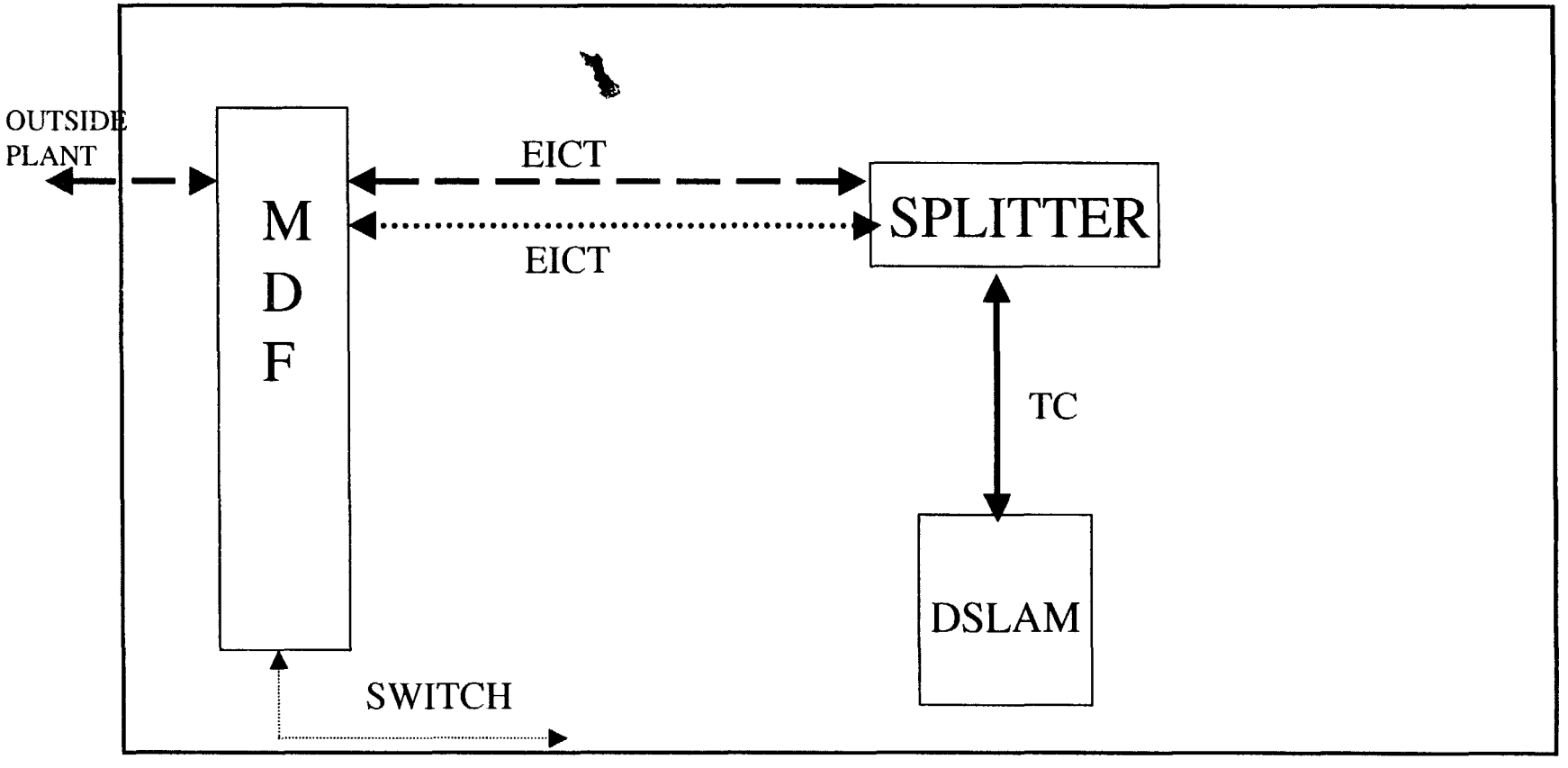
Basic Central Office Network Architecture for Line Sharing (Cosmic Configuration)



ZULEVIC ATTACHMENT A

Basic Central Office Network Architecture for Line Sharing (MDF Configuration)

---------- Voice + Data ..... Voice ———— Data



ZULEVIC ATTACHMENT B